

## **EXECUTIVE SUMMARY**

Pavement marking technology is a continually evolving subject. There are numerous types of materials used in the field today, including (but not limited to) paint, epoxy, tape, and thermoplastic. Each material has its own set of unique characteristics related to durability, retroreflectivity, installation cost, and life-cycle cost. The Iowa Highway Research Board was interested in investigating the possibility of developing an ongoing program to evaluate the various products used in pavement marking. This potential program would maintain a database of performance and cost information to assist state and local agencies in determining which materials and placement methods are most appropriate for their use.

The Center for Transportation Research and Education at Iowa State University has completed Phase I of this research: to identify the current practice and experiences from around the United States to recommend a further course of action for the State of Iowa.

There has been a significant amount of research completed in the last several years. Research from Michigan, Pennsylvania, South Dakota, Ohio, and Alaska all had some common findings: white markings are more retroreflective than yellow markings; paint is by-and-large the least expensive material; paint tends to degrade faster than other materials; thermoplastic and tapes had higher retroreflective characteristics.

Perhaps the most significant program going on in the area of pavement markings is the National Transportation Product Evaluation Program (NTPEP). This is an ongoing research program jointly conducted by the American Association of State Highway and Transportation Officials and its member states. Field and lab tests on numerous types of pavement marking materials are being conducted at sites representing four climatological areas. These results are published periodically for use by any jurisdiction interested in pavement marking materials performance.

At this time, it is recommended that the State of Iowa not embark on a test deck evaluation program. Instead, close attention should be paid to the ongoing evaluations of the NTPEP program. Materials that fare well on the NTPEP test decks should be considered for further field studies in Iowa.